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To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

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BEACH-COMBING FOR IRON ORE.

It has long been recognized from a beach-comber's standpoint that there are lots of fancy pickings to be gathered in along the beach; but there now comes from Milwaukee a dispatch stating that the sand of the beach of Lake Michigan a little north of Waukegan, Ill., has been discovered to contain considerable iron, and a company formed in Chicago, for the purpose of separating the iron from the sand and turning it into iron and steel. The company has been incorporated under the name of the United States Malleable Iron and Steel Company, with a capital stock of $100,000, by Henry H. Blake, Frank J. Kilcrane, and Manuel Friedlander. The promoters of the company have leased five miles of the lake front along the shore north of Waukegan, the property extending one-half mile or more into the country. The sand has been analyzed and is found to contain an average of 10 per cent. of iron ore, which runs about 66 per cent in metallic iron.

The ore is secured from the sand by magnetic separators, and an experimental plant has been erected on the beach. These separators will each of them extract forty-two tons of ore from the sand per hour, and the capacity of the plant will be limited only by the number of separators which are erected. The land is owned by a syndicate of Chicago and Eastern capitalists. It is expected that the company will be prepared in a very short time for business. It is proposed to erect a plant for the manufacture of iron and steel, and a process employed to manufacture products direct from the ore. Some small samples of iron and steel made from the ore have been tested and show a very excellent quality. A tool made of iron was twisted cold, showing no signs of fracture. It has not been decided as yet whether the plant will be built near the beach or located in Chicago.

PORTAGE LAKE CANAL.

It is now announced that vessels drawing 15½ feet can safely pass through Portage Lake channels by using care where the bottom is rocky. There is not less than 17 feet of water anywhere, and the soft bottom in the shoalest spots allow vessels to load safely to 15½ feet. A depth of 16 feet could be carried, if good and careful pilotage was displayed.

TO DREDGE LONG POINT CUT.

There is an effort on foot to induce the Canadian government to deepen Long Point Cut so that light vessels can pass through it. There used to be six feet or more of water through the cut, but a late examination of it shows that not more than about a foot can be depended on.

The cut is fifteen miles inland from the light on the end of the point, and not more than a mile in length, so that boats sheltering behind the point could sail through the cut and save a detour of fifteen miles.

The improvement at Port Dover, Ont., for the Conneaut Car Ferry Line has brought Long Point into more use, as it is the only shelter point for many miles up the lake.

A SOUND DEFLECTOR.

It is the intention of the Light-House Department to provide the Milwaukee fog signal station with a sound deflector similar to those introduced with marked success at Lake Erie ports. The contrivance deflects the sound of the fog whistle lakeward and renders it inaudible on land in a ratio proportionate to the extent of the deflection. Thus people of nervous disposition residing in the heart of the city are not disturbed by the doleful sounds emanating from the whistle at regular intervals during the nights in thick weather on the lake. The sound given out by the principal fog signals not fitted with the deflector has been likened to a cow bellowing, but it would take a whole herd bellowing all together to reproduce the volume of sound as heard on shore.

AMBERGRIS.

There has been a wholesale stranding, as reported in the daily papers, of a large number of sperm whales on a portion of the coast of New Zealand. This brought a London chemist to remark that "ambergris is a peculiar accumulation in the intestines of diseased whales of a certain species, and is immensely valuable, sometimes rising to a price of £10 sterling for the ounce in the English market, for it is used as a property, and nothing whatever can supply its place adequately in all really high-class perfumes, which it develops and accentuates in a wonderful way.

"Sometimes when a dead whale is discovered that same find produces a fortune at once to the lucky discoverer. I may say that I have known states of the market when ambergris could scarcely be got for love or money. One of the latest of the really authentic stories relating to ambergris deals with two Hobart Town fishermen, who, in 1891, begged, for some service rendered, the carcass of a whale from a ship's captain. This whale yielded a mass of ambergris weighing 2,603 ounces, of the value of $115,000, and one fact of the story is that the ship's captain was so chagrined at passing the treasure by that he committed suicide. The mass of precious ambergris was consigned to a Londoner, who was artful enough to dispose of it in very small quantities, to keep the matter a secret, and to take care that the market was not flooded. Ambergris is sometimes found floating near where whales congregate.

"Thirteen years ago a wholesale chemist, like myself, bought an old business, and he noticed one package among the stock which had, old servants of the firm said, been lying in the warehouse for years, it having come from the West Indies, and never, apparently, been opened. Examination revealed that this supposedly worthless parcel was a lump of ambergris weighing three hundred-weight, and it fetched 190 shillings an ounce at the then market price."

HOW THE ENGLISH LLOYDS INSURE.

"A man said to me the other day," said Capt. J. C. Burton, the well-known insurance agent of Detroit, to a Journal reporter, "that the insurance companies must be making 'a pretty good thing' this year. I asked him why. 'Well,' he said, 'you have had so few losses to cover.' Yes, I said, but we have been rebating on boats, lots of them, and it only takes a few accidents on large boats to cut a big hole in premiums, I can tell you. Now the English Lloyds come into this country, and can come into this state and get business and give a rate 3 per cent better than any other company, and still make just the same. You know there is a state tax of 3 per cent on the gross premiums of a company doing fire or marine insurance business, I don't know anything about life insurance. For instance: A Detroit vessel owner wants a risk taken by the English Lloyds. He applies to the agents stationed in New York city. They forward the application on to Liverpool and it is made up. Now there is a law in this state and in New York state, and I guess in the rest of the states, prohibiting an agent doing business for boats owned in that state with a company not properly admitted to the state. The Lloyds have another office in Philadelphia, and any business that they cannot have done for New York shipping in New York, they can make application to the Philadelphia office and have the application forwarded to Liverpool from there. The Lloyds is not admitted to a single state in this country, nor have they even so much as an attorney on this side of the water. In my recollection, however, there has never been a disputed case with them. Any one who would begin action against them must do so in England, and sooner than allow such a contingency to arise, and so jeopardize their great interests here, they are willing to pay a little more. Their saving of three per cent on the gross premiums alone amounts to a large sum yearly. I would favor making the admittance of foreign insurance companies a federal affair. Then they would have to stand on an equal footing with the rest of us."

THE MUSKEGON'S DAMAGE.

It now appears that the damage to the steamer Muskegon, incurred while dry-docking at Milwaukee, is not as great as was supposed. Surveyors who examined her as she rested in the dry-dock before being floated agree that the steamer can be put in as good condition as she was before the mishap for from $4,000 to $5,000. It is understood that the dry-dock company offered to place the Muskegon in thorough repair for $4,000 or submit the matter to arbitration, and in the event of the rejection of these propositions to enter into litigation.

The dry-dock company attributes the accident to the fact that the engineers began drifting out two broken holding-down bolts, to replace which the craft was being docked, before she rested upon the blocks, and that when her weight began to rest upon these bolts, which exceeded in length the height of the keel blocks, they bent and sent the steamer ahead so that several blocks were tripped by them, which caused the forward end to drop upon the floor of the dry-dock.

NEWS AROUND THE LAKES.

BUFFALO.

Special Correspondence to The Marine Record.

They say that the build of the Monteagle saved her from being torn entirely to pieces when she went ashore in the St. Lawrence. Her frames are solid, which make her bottom firm as a rock. She was built at the Mills dry-dock here.

Charley Hebard has now dropped his last cane. He runs the Pickands-Mather ore dock and fueling business and broke his leg some time ago. But he was game and instead of lying abed all summer, was soon out again on two crutches. Gradually he went from crutch to cane and now goes it alone again.

Steamboat men say that the average canal schooner behaves in about the same fashion when towed at an eight-mile rate or faster. The build of the hull is such that there is not enough motion of the water under the stern to afford steerage way, and the schooner changes the point of the compass so fast that an ordinary sailor would be scared half to death.

Such a time as they are having with the settlement of the loss on the big lumber barge Mautenee. She was waterlogged on Lake Superior months ago, but is still at Tonawanda, where she has lain several weeks waiting for the surveyors. The experts who looked the cargo over disagreed for weeks but at last came to a settlement at $5,680, but the hull will have to be surveyed over again, as the first surveyors have given up any expectation of getting together.

Navigation of Lake Erie by canal boat is getting to be risky, but the boats still make the trip. Insurance men are a trifle doubtful of the safety, in a general way, of a canal boat, but the steel fleet is reckoned seaworthy, as a sea would roll over the boats without swamping them. When the first tow came down from Cleveland there was consternation among insurance men. The steering gear of the consorts was insufficient and they came in standing in all sorts of directions

The fleet laid up here is smaller than was supposed possible a month ago. The Farwell and Rutter and the lumber barge Taylor are about all except three or four Bradley boats and two Lehigh Liners. It is queer how a general sizing up of the situation goes amiss sometimes. In my last letter it was remarked that the line boats had fared well this season and before the line was in print the Grand Traverse, of the Lackawanna Line, was cut in two. Still there might be worse losses than this one.

Coal freights are not going up, but coal shipments are. The custom house report for the week reaches 110,000 tons, which is a big average for any part of the season. And all the while it looks as though there was next to nothing doing in coal shipments, just because the cargoes are so much bigger than they used to be. It is now next to a certainty that the shipments from this port this season will exceed the amount for several seasons past. This is hardly in line with the predictions of late that the roads were absorbing all this business. They may be getting hold of the soft coal business, but the hard coal trade sticks to the water still.

They tell something of a story of the captain of the Siberia. He is reported to have had a difference with one of his deck hands on the previous trip and soon after he landed here some one handed a letter to him from a city lawyer who is noted for taking the cases of men who are trying to get even with their captains. But the captain in this case was wary. He well knew that the letter contained a summons to a parley and he quietly dropped it over the edge of the dock into the creek without opening it. This time down the deputy marshal was asking for him, which may mean a continuation of the plan of attack.

There is to be a new elevator and a new coal trestle in the harbor. The W. N. Y. & P. trestle, long known as Scott's dock, as it was handled by Scott & Co., of Erie, will be torn down and a new one built in its place for the use of Coxe Bros., who have used it a long time. It will be given about 7,000 tons capacity, which is something like twice what it will hold now. The elevator is to be made out of the old Queen City flour mill at Ferry street. The Ryan elevator has done so much business there during this and last season that it is supposed to have made a pile of money for its owners, and the millers will now see if there is not something in the business for them. Plans have been drawn for the changes needed, but nothing will be done this season. The Ryan elevator is out of the pool and works on a cut-rate basis.

Close to 11,000,000 bushels of grain and flour reckoned as grain! This would be something to be proud of without stint if it were not for the half dozen cargoes left over Saturday night and obliged to stand the chances of another day or so of waiting this week. Of course there are special reasons for the waiting. The elevators are doing well, but the canal fleet has been allowed to run down till it cannot supplement the roads as it should and there is no such thing as taking care of a fleet such as is coming in here by the railroads alone. Were the canal to be abandoned through the slack part of the season there ought to be a big fleet to set in operation in the spring and fall in order to act in the double capacity of carriers and storage warehouses. Take for instance a vessel that can carry 200,000 bushels of corn at two cents a bushel even, with the item of coal west to pay running expenses, to lose a single trip on corn there is a clean loss of $4,000. This alone would build more than one canal boat and when the day of trolley towing and exact time for canal trips is a fact, there ought to be capital that touches hands all the way from the upper lake ports to the seaboard by means of canal fleets.

JOHN CHAMBERLIN.

DETROIT, MICH.

Special Correspondence to The Marine Record.

General Manager Carter, of the Detroit & Cleveland Steam Navigation Co., says: We will make arrangements this winter to give double daily service between Detroit and Cleveland next year. Boats will leave both ports every morning and every evening. If the plan cannot be carried out by the line's present boats, a new one, similar to our larger steamers, will be built. Our passenger rate of 50 cents, including berths, and the rate of 20 cents a ton on the lowest class of freight, will be continued.

Capt. J. C. Burton said it seemed to be an idea among many people that the insurance companies were having a pretty pleasant time of it this year, "whereas, the truth is," said the captain, "the insurance companies are not doing very well, and are still to go through the most trying part of the season." The captain rather inveighed against the Lloyds (foreign), and said they did not so much as have an attorney in this country, and did all their great business here through only two offices. Nor had they been admitted to do business under the laws of a single state, thereby avoiding the 3 per cent state tax, which placed them on an equal footing with the other companies when they underbid them by that much. The captain concluded by saying that they should be regulated by Federal statute, in which case they could be controlled and compelled to pay their tax the same as the rest of the domestic companies.

The Grummond management declare they are determined to lead the fight against the D. & C. Line into another year, and in order to be prepared to effectually compete with them, have decided to build two large steel steamers, which, they say, will be ready about the first of May next. The steamers will be about 225 feet long, and will sleep 300 people each. They wil be screw wheelers. Grant Grummond said to THE REGORD: "Prices will never again be as high as in the past between Detroit and Cleveland. That day has passed. I am not yet ready to give out the names of the stockholders, but I may say that they will be given out not later than next week. We will organize for $500,000, perhaps $600,000, and each of the new boats will cost $150,000. I have had great success in getting stock subscribers, for there is no doubt there is room for another route between Detroit and Cleveland. One-third of the stock has been taken in Detroit, and the balance in Chicago and Cleveland." James Davidson, of Bay City, and John Craig, of Toledo, it is reported, have been asked for estimates.

CHICAGO.

Special Correspondence to The Marine Record.

Capt. William Dandy was appointed master of the schooner Sandusky last week.

George Van Avery has succeeded H. N. Wadleigh on the Lehigh Valley Liner Tuscarora.

Capts. Gibbs, of Milwaukee, and J. A. Calbick, of Chicago, and J. W. Bates, shipbuilder, of Chicago, made a survey of the Haskell in the dock.

Daniel Robertson, recently chief engineer of the steam yacht Hinder, has been appointed chief engineer of the L. M. and L. S. Transportation Co.'s steamer Jay Gould, vice B. Williams resigned.

Capt. John Prindiville chartered the steamer Oscar T. Flint for wheat to Toledo at 2⅝ cents; schooner Emily B. Maxwell for corn to Port Huron at 2¼ cents; steamer Niko for flaxseed at 2⅝ cents, and consort Churchill for rye at 2⅝ cents, both to Buffalo.

The tug Morford which was assisting in releasing the Aragon, got a line in her wheel shortly before the steamer left Hyde Park Reef for South Chicago. The tug was towed to South Chicago and a diver got the line out of her wheel and she came back to Chicago.

J. W. Bates & Co., shipbuilders, have done some general repairs on the steamers Alleghany and new Orleans, have calked the main deck of the steamer Jay Gould and put a new grain bulkhead amidships in the steamer Geo. W. Roby. A canal boat is receiving some new plank on both sides, new fender strakes and calking

J. A. Calbick & Co. chartered the steamer J. H. Prentice and consort Halsted for wheat to Toledo at 2½ cents; the steamer Robert Holland for lumber, Menomineee to Chicago, at 11 shillings per 1,000 feet; the steamer Robert Holland and consorts Warmington and Miuch for lumber, Manistique to Chicago, at 11 shillings per 1,000.

H. W. Cook & Co. chartered the steamer City of Glasgow for clipped oats to Fairport at 1½ cents; the steamer New Orleans for clipped oats to Sarnia at 1½ cents; the steamer Germanic and consort Emma C. Hutchinson for corn to Buffalo at 2½ cents; steamer John H. Glidden and consort Aberdeen for corn to Prescott at 4⅛ cents, free of tolls.

Carr & Blair chartered the steamer George W. Roby and consort W. D. Becker for corn to Buffalo at 2½ cents; the steamer Lindsay for corn to Oswego at 4 cents; the schooner J. C. Fitzpatrick and steamer Progress for wheat to Buffalo at 2⅝ cents; the steamers Manola and George T. Hope for corn to Buffalo at 2½ cents.

At the Chicago Ship Building Co.'s shipyard the steamer Aragon was in dock and received repairs to damage sustained by her running on Hyde Park Reef. The damage to her bottom was but slight, the wood sheathing outside the steel plating having saved her from much larger damage. The Anchor Line steamer Wissahickon is in dock to have a leak stopped and some calking.

The steamer Aragon, with iron ore bound for South Chicago, ran on Hyde Park Reef last Friday morning in a dense fog. She was released Saturday morning after lightering about 500 tons of her cargo and was towed to South Chicago by the tug T. C Lutz, and after her cargo was unloaded she went into dry-dock for repairs. She loaded grain at Chicago Monday and left for the lower lakes Monday night.

The schooner Cora A. is a record breaker. She left Ford River, Mich., Tuesday night at 7 o'clock with 488,000 feet of lumber for Chicago, consigned to the People's Lumber Co. in the north branch, unloaded her cargo aud got back to Ford River the following Friday night at 10 o'clock. This certainly is a splendid showing for a sail vessel. The Cora A. is one of the newest and smartest schooners on the lakes and Capt. A. Anderson is justly proud of her.

At Miller Bros.' shipyard the steamer Charles Reitz was in dry-dock for a new stern bearing; the steamer T. Y. Avery for some new bottom and calking; the steamer William A. Haskell is in dock for repairs to damages done by her going on Squaw Island Reef on her way up. The repairs will comprise 60 feet of new keel amidships, 39 feet of new keel aft, six new frames on the starboard side forward, six pieces of new garboard, 24 new bottom planks and some general repairs and calking all over.

Hiram H. Wadleigh, chief engineer of the Lehigh Valley Transportation Co.'s steamer Tuscarora, was taken ashore from the steamer on her arrival here, Saturday morning, and conveyed to St. Luke's hospital, where he died on Sunday morning, aged 59 years. He was one of the oldest and best known engineers on the lakes, and was held in high esteem among his fellow engineers and his many friends. The deceased served under Farragut, being second engineer of the Metacomet at the battle of Mobile Bay. He was on duty on the Mississippi River for two years, and at the close of the war came to Chicago where he has seen 35 years' service on various steamers, among which were the Tuscarora, Saranac, W. H. Wolf, Jim Sheriffs and Mary Groh. He leaves a widow and two sons and two daughters, the Rev. Thos. B. Wadleigh, pastor of the Methodist church at Spring Valley; H. N. Wadleigh, Jr., of this city; Mrs. Ella McDonald, St. Louis; Mrs. J. H. Randall, Minneapolis. The funeral was held Tuesday afternoon from 161 Twenty-second street, from whence the remains of the deceased were taken to Oshkosh, Wis., for interment.

WILLIAMS.

MILWAUKEE, WIS.

Special Correspondence to The Marine Record.

The Davis Brothers' Manufacturing Co. have completed a marine fire box boiler 6½ by 11½ to be allowed 150 lbs. steam pressure for the tug S. S. Coe.

The Milwaukee Dry Dock Co.'s offices, storerooms and blacksmith shops which were burned down in August last have been replaced by more commodious and improved buildings. To the offices has been added a directors' office, in all the offices, modern improvements for convenience and comfort have been supplied. The oil room on the building has been built fireproof and the storerooms for iron and steel and a separate one for oakum, also the blacksmith's shops are enlarged and much more complete than those in the former building.

WILLIAMS.

CLEVELAND, O.

Special Correspondence to The Marine Record.

Capt. J. A. Holmes has resigned as master of the steamer George W. Roby, and Capt. Charles Hinslea, formerly master of the steamer Specular, has taken charge.

The most enjoyab'e fall weather possible has been experienced here this week and it certainly has had the effect of brightening up business on and around the water front.

The new daily maps promised some time ago by the Weather Bureau have been issued this week. They are, I think, a great improvement on the old form of detailing local weather conditions.

Orestes C. Pinney, Esq., lawyer and proctor in admiralty, has removed from his late suite of offices in the Perry-Payne building, to more commodious and convenient rooms on the third floor, Nos. 316 and 317.

The new Bessemer Co. steamer, James Watt has been completed at the yards of the Cleveland Ship Building Co., and, as she will not be fitted out this season, was towed up the old river bed this week for winter moorings.

Mr. H. Wendt, chief officer of the steamer J. C. Ford, a vessel built by the late Wm. Kirby, of Grand Haven, Mich., paid us a pleasant call this week and related some of his salt water experiences. Mr. Wendt will cross to Europe this winter and visit his friends in Bremen, but chiefly to see his mother.

There are now twenty-six of the Shaw and Spiegle

steam-towing machines in use, all manufactured by the American Ship Windlass Co., Providence, R. I. Mr. Frank Manton, agent for the company, has just completed a western trip and says that business is fairly good at present, with a most favorable outlook.

A prospectus of the "Illustrated history of the Great Lakes" to be published by J. H Beers & Co., Chicago, is now out and judging from the features which are to be treated upon, it will form the most valuable compendium of lake history that has ever been published. The branch office in charge of Captain Andreas, with an efficient staff, has been located in the Society for Savings building, No. 233.

The many friends of Capt. W. W. Brown, secretary of the Cleveland Dry Dock Co., will be sorry to learn that he met with a severe accident this week. While driving from his home to the dock, a runaway team collided with the captain's buggy and he was thrown out, receiving more or less injury. He is not seriously hurt, however, though one can never tell how these nasty falls turn out in the future.

A repair job that reminds me a good deal of the late John Smith's time is recorded as being done at the Globe works on the steamer Roman; in five and one half days, 42 bottom plates were taken off and put back, 87 frames were removed and put back, 45 floor frames were straightened up and 18 new floor frames were put in. Part of the keel plate was straightened and 10 feet of new keel put in. William Sutton superintended the work at the Cleveland Drydock and he is to be congratulated on the speedy and successful result of the job.

The local shipyards are more than dull just at the present and although some figuring is being done for special tonnage I have not yet heard of a contract being placed since the Globe received the orders to build a steel barge. The Cleveland Shipbuilding Co. are busy on repair work and they certainly get their full share of it as it suffices to keep that extensive plant in full running order.

There is not another shipmaster on the lakes who at the age of Capt. George Mallory, now acting as shipshusband for the Minnesota Steamship Co. (Pickands, Mather) also the entire whaleback fleet handled at this end of the lakes by that company who has had so successful and continuous a career as he has had. When but a youngster his brother and he built a scow which George sailed, and successfully too. From his scow days, and he was in several of them, he kept moving onward and upward always seeming to get hold of about the biggest tonnage going, and bringing out, after superintending their construction, the large steel steamers of the Minnesota fleet. I suppose he never thought when he was driving fastening into his scow "Mona," and calking the seams before paying them, that in a few years later he would be waltzing over the ground on a 400 footer at a railway gait, with nary a thread of oakum in her, nor even such a thing as a marlinspike aboard to strop a cat-block if he wanted to. Capt. George is a very modest man, too; a luff upon luff couldn't budge him to tell even as much as I have scribbled here, but there are others who have been keeping tab on his movements and can vouch for the foregoing whether he likes it or not.

WATER BALLAST.

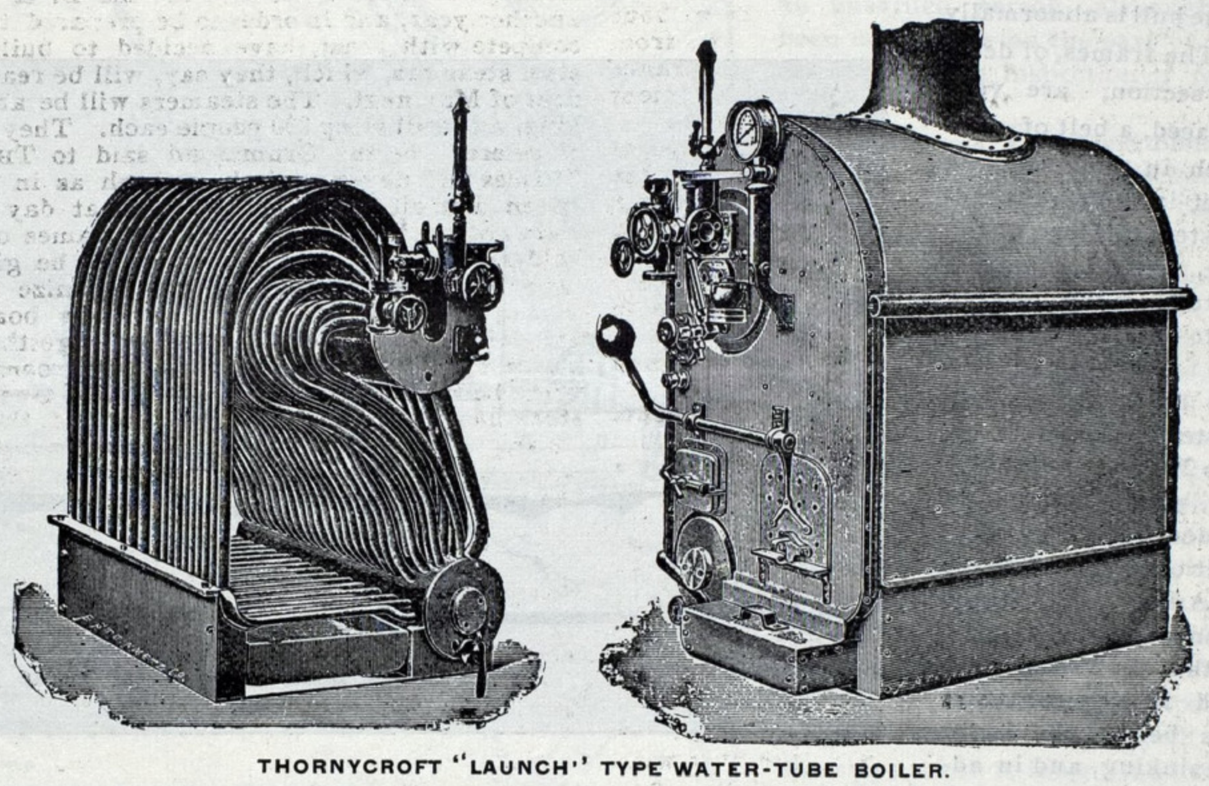
In these days when every possible convenience and appliance is used for carrying and discharging water ballast, it is somewhat of a novelty to note the salient points of a paper by Mr. M. W. Aisbitt, a member of the British Institute of Marine Engineers, on "Water Ballast for Steamers and Sailing Vessels." The author devoted the first part of his address to a review of the history of ballasting in relation to the ships of the mercantile marine, and described some curious effects of old methods of shipping sand and stones. He pointed out that on the introduction of iron for the construction of steamers and sailing vesssls, this ballasting was found to cause considerable delay and expense, and said that various means were taken to obviate these objections. The paper then proceeded as follows: Perhaps one of the first methods adopted was an idea of carrying water ballast in large canvas bags containing, say, one or two tons of water each, which when the vessel was discharging, were filled, and on being loaded were emptied and laid aside. This, however, was not found to succeed, and was soon, I think, discarded. One of the first sailing vessels of which I have record that was fitted with water ballast was the iron schooner T. W. S., built, I think, at Llanelly, Wales, about the year 1856, which was fitted with a double-bottom very similar to those of our present day steamers, the filling and discharging of which was very simply and ingeniously effected. When the vessel arrived at her destination, and before discharging, an inlet valve was opened and the tanks run up, the pressure of the vessel's loaded displacement of course filling them completely. The valve was then closed, the vessel discharged, and on her arrival at her loading port, where she generally loaded on the ground, the discharge valves were opened and the water ballast run out. About the year 1860, the steamship John Bowes, a screw steam collier, built by Messrs. Palmers, of Jarrow, for the purpose of carrying coals from Newcastle to London, was, I think, one of the first steamers fitted with a double-bottom for water ballast purposes. From that date up to 1865 it became customary for the ordinary cargo steamers constructed on the Tyne and in Sunderland to be fitted in a similar manner with different type of tanks. Deep ballast tanks, i. e., those in which cargo or ballast could be carried as desired.

THORNYCROFT "LAUNCH" TYPE BOILER.

(ILLUSTRATED.)

We illustrated in our issue of the 22nd two types of the celebrated Thornycroft boiler, viz. the "Speedy" and "Daring" form, we now showing two cuts of the "launch" type, the first being an exterior view, and the second showing the steam generating part with the casing removed.

It may be seen that the boiler is of the water-tube type, being, in fact, half a Daring boiler, with the outer wall of tubes brought round to the center barrel, in place of terminating in the usual wing tubes; the horizontal part of the wall tubes being used as fire-bars. It should be explained that the wall tubes, which start from the upper chamber, are continuous to the lower barrel. In the cut this is not very clearly shown, as the baseplate of the boiler obscures the view where they are bent round. Of course water firebars have been suggested from time immemorial, and frequently tried, but have failed sooner or later from two causes, one being that when fixed rigidly in position, the expansion and contraction has caused their destruction, while owing to the want of circulation, they have scaled up rapidly. In the present case, the firebars forming part of a large loop of tube, the former defect is removed, whilst the rapid circulation, which is common to all types of the Thornycroft boiler, prevents any trouble from scale. Thornycroft & Co. are represented in the United States by Messrs. Thorpe, Platt & Co., 97 Cedar St., New York.



THORNYCROFT "LAUNCH" TYPE WATER-TUBE BOILER.

AN ATLANTIC LINER'S SOILED LINEN.

Some curious individual who can't let anything go by without inquiring into the why aud the wherefore, has found out that as there are no laundries aboard of the largest transatlantic liners, the chief steward has to ship thousands of pillow-slips, sheets and towels. These, it appears, are brought on board tied up in bales and are stored in the linen locker, the ventilator pipes from the engine room running through it and keeping the linen room always hot.

The linen that has been used is thrown into another room provided with the same atmosphere, and is kept thoroughly dry. Where there are clean napkins every day, frequent changes of stateroom linen, and an everlasting replenishing of towel racks, the demands upon the linen lockers are very extensive.

A liner like the New York puts to sea with about 9,000 serviettes, 10,000 towels, 6,000 or 7,000 sheets, 8,000 pillow-slips, and about 1,000 table-cloths. Most of these find their way to the soiled linen locker in the course of the voyage. When the vessel arrives they are carried off to a laundry.

FLOTSAM, JETSAM AND LAGAN.

On 2,000,000 feet of lumber from West Superior to Michigan City $2.25 is being paid.

The owner of the scow Aunt Ruth claims that he would have saved $200 if he had tied up his schooner two months ago.

Capt. Stewart, of the Samoa, is ill and Capt. Furry of the Shenandoah will sail her the remainder of the season. The Shenandoah will lay up when she reaches Buffalo.

The Bessemer Steamship Co's. steamer Siemens, from Duluth with her first grain cargo, broke the Lake Superior record last week. She loaded 174,500 bushels of wheat for Buffalo, a cargo equal to 5,235 net tons.

The Ludington Mail states that in addition to the big car ferry steamer and the Nos. 2, 3, 4 and 5, two outside steamers will find employment between Ludington and Milwaukee the coming winter.

Last week eighty steamers and six schooners arrived in Milwaukee with the following cargoes: Coal, 16; merchandise, 57; lumber, 8; wood, 3; posts, 1. The season has been a very poor one for the owners of the schooners.

The new twin-screw steamer Queen Louise, 20,000 tons displacement, 550 feet long, 60 feet beam, of the North German Lloyd Steamship Co., was successfully launched at Stettin on Saturday last from the yards of the Vulcan Shipbuilding Co.

The steel steamer Zenith City, has broken the record on large cargoes of oats. She loaded 289,000 bushels at the Bartlett-Frazier Elevator A, South Chicago last week. The largest previous record was held by the steamer S. S. Curry—247,000 bushels.

A difficult feat for a schooner has just been performed at sea by the B. I. Hazard, a three-master. She picked up the water-logged three-masted schooner Lelia Smith, off the North Carolina coast, and towed her to a safe anchorage, four miles southeast from North Beach life-saving station, after which she was towed to this city.

The United States tug Williams, while attempting to enter the port of South Haven to inspect the harbor improvements in progress there, stuck in a sand-bar at the mouth of the harbor. She was released and immediately steamed away. Vessel men hope the grounding may tend to hasten improvements to the harbor.

Chicago underwriters received a dispatch this week from Colchester, Ont., which stated that 580 barrels of apples, constituting a portion of the cargo of the sunken steamer Grand Traverse, had washed ashore there, and asked what should be done with them. As apples are worth only 80 cents per barrel the underwriters wired back: "Eat them." The hull and cargo of the steamer have been abandoned by her late owners as a total loss.

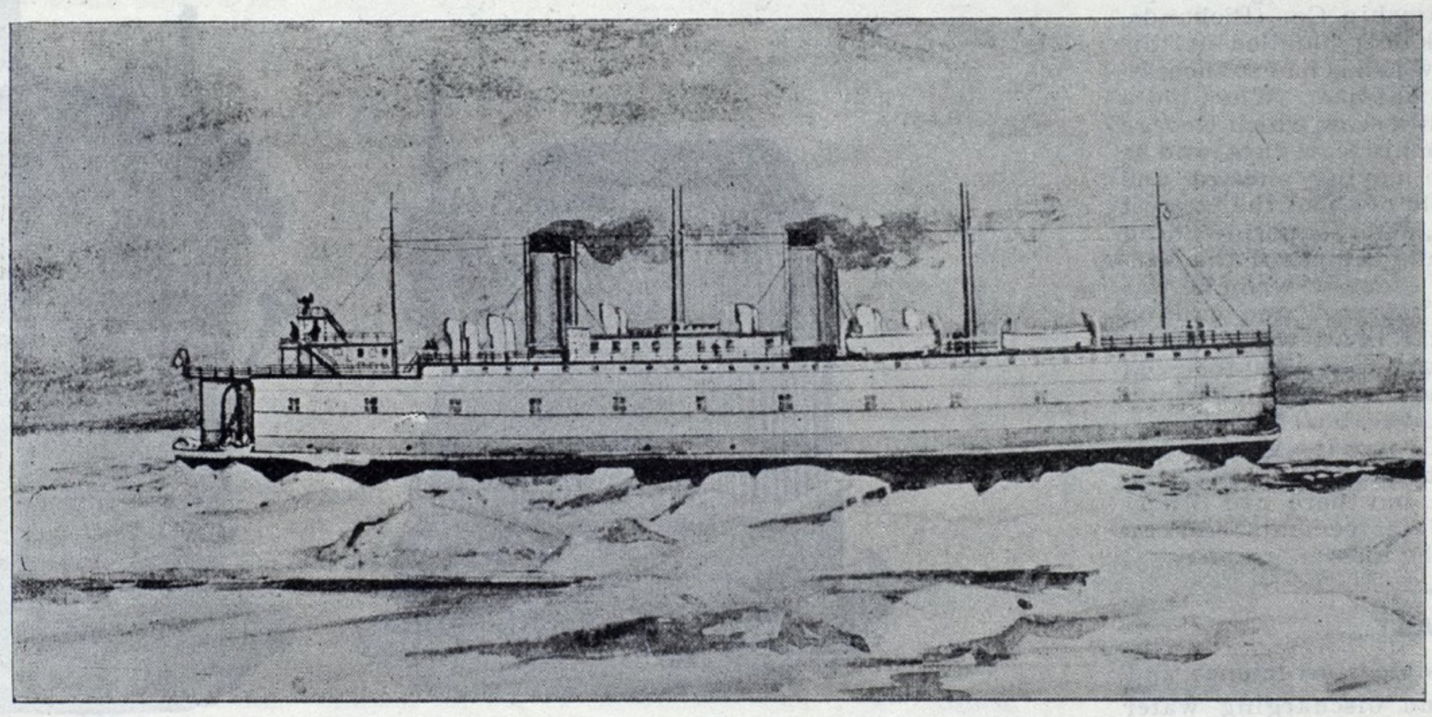
The Gilchrist & Fletcher Wrecking Co., of Alpena, Mich., recently purchased from the Grummond Line, of Detroit, a complete set of steam pumps and boilers. This makes three complete sets of pumps owned by the Alpena company. They have also two powerful wrecking tugs, two smaller tugs, diving apparatus, etc., making the most complete wrecking outfit on Lake Huron, whether for surface or submarine work.

AN ICE CRUSHER FOR SIBERIA.

(ILLUSTRATED.)

That even lake shipbuilders should not take too much credit upon themselves for special, modern and the quick putting together of large vessels is evidenced from the illustration of an ice crusher which we herewith reproduce from The Shipping World, London. Furthermore, it is but a year or two since that it was thought a Russian contract like this would have been placed on the lakes. The Detroit Dry-Dock Co., the Cleveland Ship Building Co., F. W. Wheeler & Co., of West Bay City, and the Craig Ship Building Co., of Toledo, O., have each turned out winter ferry boats as ice crushers, and, as a rule, they have met with all the success that their owners and builders contemplated, more especially so, perhaps, in the large iron and steel boats. However, it will be an object lesson for lake builders, designers and owners of these vessels to note how successful our English competitors are in turning out this special class of tonnage. The description and cut as furnished by The Shipping World, of October 14, shows a ferry steamer designed and constructed for the Siberian Railway, by Sir W. G. Armstrong, Mitchell & Co. She will be employed in transporting passengers or freight cars across Lake Baikal. For nearly half the year the lake is frozen. Hence the vessel's lines are such as to offer the least resistance to motion through the ice.

The stem and stern are heavy steel castings, which will concentrate on a small surface the momentum of the vessel and inflict on the ice the severest shock possible. The hull is abnormally strong. The frames, of deep-channel section, are very closely spaced, a belt of plating 1 inch in thickness and some 9 feet in width, extending from stem to stern at the water-line, and all constructional details being worked out so as to offer the greatest resistance to the pressure of ice. The hull, of Siemens-Martin steel, properly inspected, is 290 feet long by 57 feet beam, with a draught of water under ordinary working conditions of 18 feet 6 inches. Ample water-tight subdivision has been provided, so that the vessel must be pierced in several compartments before she is in danger of sinking, and in addition to the usual water-tight bulkheads an inner bottom is fitted on somewhat the same system as that which obtains in ships of war.



A SIBERIAN FERRY STEAMER.

The cars are run over a hinged gangway on to the railway deck, where they are secured in position by means of special appliances. Passengers are carried on the decks above in several private state-rooms and a private saloon, in addition to large public saloons or waiting rooms. The accommodation generally has been arranged so as to provide for the comfort of the passengers in the highest possible degree. A curious feature of the vessel is the arrangement of the propelling machinery. There are three sets of triple expansion engines working at a pressure of 160 pounds. Two sets drive twin propellers fitted as usual at the stern, and the third a propeller at the bow of the vessel. The last is for the purpose of disturbing the water under the ice so as to assist the heavy steel stem to break up the solid field ice, that it may be pushed aside by the advancing vessel, designed to fulfill this duty, as is usually done in lake practice.

This large vessel of 4,200 tons displacement has been constructed in less than six months, taken down again and packed on an ocean steamer for shipment to St. Petersburg, from whence railway wagons will convey the material to the furthest accessible point on the Siberian railroad, the rest of the journey to Baikal being accomplished on sledges. A naval architect employed by the Siberian railroad is already at Lake Baikal making preparations for the reception and erection of the parts of the steamer. To facilitate this last operation the builders have supplied the machinery and fittings for a floating pontoon dock, on which the ferry steamer will probably be rebuilt, so as to obviate the necessity of provision for launching. In view of the great difficulties of transport, the weight of each portion of the vessel and machinery has been reduced to a minimum. The boilers are considerably the heaviest items, but the weight has been kept below twenty tons each. It is not uncommon to build small vessels in England, take them to pieces, and pack them up for shipment abroad, but this is the first time on which this operation has been conducted on so large a scale, the length of the overland journey greatly increasing the magnitude of the undertaking.

NORTHWESTERN ASPIRANTS FOR LICENSES.

The Portland, Oregon, Telegram says there is occasional fun at the office of the inspectors of steam vessels there in the examination of young men from up the rivers who come down to apply for captain's licenses. The applicant, it says, generally gets as far in the examination as the fourth question, which asks: "To what height may the anchor light be hoisted?" This is a sticker. He has possibly seen an anchor, at any rate he has heard of one, although there is none used on his boat, for she ties up to the bank; but what in the name of Neptune they hoist a light on it for, or how they hoist it, whether it is suspended from one of the flukes or tied to the stock, he cannot imagine, and the answers he will give would put life into a morgue.

One bright sailor from the Upper Snake answered: "High enough to keep it clear of the bottom and snags." Another, who had a better idea of what was meant, wrote: "So high it can be seen in all directions." Still another thought "the top of the front mast" was the proper height and position for an anchor light.

The next question is: "At what distance should the light be visible?" The answers to this, if the applicant has not become brain fagged puzzling over the previous one, range from "one-half mile" to "as far as you can see."

The true answers are: "The anchor light shall be hoisted to a height not less than 20 feet from the deck, and be visible on a dark night at a distance of five miles."

WRECKING OPERATIONS.

The crew of the wrecking steamer Gilbert, of Sackett's Harbor, N. Y., with Capt. Hemens, Prof. Carl Myers and diver Wm. Rulison, which lately located and pumped coal from the schooner North Star, lost ten years ago in 90 feet of water, has been, during the past week, recovering cargo from the steamer Oconto, which sunk July 6, 1886, in the St. Lawrence opposite Thousand Island Park and now lies in 192 feet of water in a current always thought too swift for working. That portion of her cargo of general merchandise, billed from Ogdensburg to Chicago, which has been thus far recovered, is in a remarkable state of preservation, though under water more than ten years. The owners or underwriters are now being sought with a view to raising the vessel.

NEW COMPANY FORMED FOR LAKE SHIPMENTS.

Application has been made to the secretary of the state of Ohio for a charter for a new company which is to be called, The Cleveland Coal Loading Co., with a capital of $30,000. The incorporators of this company are, R. R. Rhodes, R. K. Pelton, J. A. Beidler and others, all of Cleveland. The object of the company is to engage in the business of buying, selling and transshipping coal for the lake trade. It is proposed to take the output of Sheppler, Webster and other mines situated on the Pittsburg & Lake Erie Railroad. This company will have the best equipment obtainable for their bnsiness and will be in position to handle coal at the beginning of the lake season of 1897.

POLITICAL NAUTICAL DISPLAY.

While the great seaport city of New York has for weeks past been working up sentiment and talking about having a unique aquatic display to showing political leaning or sympathy, the progressive city of Duluth (the Zenith City), situated at the head of navigation on Lake Superior, distanced her eastern competitor by having, without any preliminary circumlocution and unnecessary delay, on Saturday last, a most beautiful maritime show in and around that magnificent natural-formed harbor.

That there is nothing slow about Duluth, and by that we mean her citizens as well as the geographical advantages given the location, is evidenced from the manner in which Capt. McDougall (inventor of the whaleback model), who was chairman of the committee on arrangements of the shipping interests, was enabled to carry out the program of events, but not only is credit due the captain alone, for all of the vesselmen, including owners, builders, brokers and those engaged in the practical every day handling of tonnage, entered into the spirit of the display with the enthusiasm proverbial in marine communities.

The evening might have been formed for the occasion, as it was a dark night with a clear atmosphere. No less than thirty steamers were in line, and as the gun fire signal was given they proceeded to evolute, displaying an abundance of fireworks, Chinese lanterns tastefully arranged in a picturesque manner, guns firing and steam whistles blowing loud enough to "raise Cain," while the water front was swarmed with well-pleased citizens. Now that Duluth has inaugurated a custom of expressing political preferences, perhaps other and more ancient communities will follow in the wake of Proctor Knott's protege, and that, too, without fooling valuable time away in contemplating the possible—or rather positive—effect of well placed energy and financial liberality to successfully carry out such a grand project.

WELLAND CANAL CARGOES.

There are no more long-boat loads worthy of floating through the Welland canal after the experience of the whaleback steamer E. B. Bartlett, and her consort, the barge 111, taking a total of 157,500 bushels through there, as on Tuesday the steamer had 71,500 bushels ot wheat and her consort 86,000 bushels. Capt. Jones, of the Bartlett, said he held the boats in the lake all night, being afraid of grounding in the canal. They, however, reached Port Colborne all right, drawing 15 feet.

A NEW LAKE ERIE ROUTE.

The returns of the Conneaut-Port Dover ferries for the months of August and September shows a picking up in freight tonnage for the month of September. Two boats were running during August and but one during September. The number of regular passangers carried during September was 77, excursionists 125, tons of freight 22,530, cars 923.

BUFFALO HARBOR IMPROVEMENTS.

EXTENSION OF BREAKWATER AND SAND CATCH PIER. (ILLUSTRATED.)

There is something wholesome in the liberal form of permanent improvements which Major T. W. Symons, Corps of Engineers, U. S. A., is about carrying out in the Buffalo district, in accordance with the act of Congress relating thereto. The sum of $2,200,000 will be spent in conserving the approach to Buffalo and specification for bids on the work having been sent out, contracts are to be opened November 30, and the work proceeded with at an early date thereafter.

This project was begun in 1894, when Major E. H. Ruffner, then in charge of the government work, was ordered to prepare a plan for the extension of the break-water southerly to Stony Point. His report thereon was submitted in February, 1895, but his plans were not approved. A board of engineers was then appointed and made its report in July, 1895. Its plans and estimates were approved. This board consisted of Gen. H. L. Abbot, Major H. M. Adams and Capt. D. C. Kingman.

In the autumn of 1895, Major T. W. Symons was placed in charge of the Buffalo harbor work. Major Symons immediately began a thorough study of the harbor and its needs, and of the approved plan of the board of engineers for its improvement. He found many defects in the board's plans and after much consideration, he submitted to the department in Washington a plan differing radically from the one already approved. Major Symon's plan was approved by the division engineer, Col. John M. Wilson; by the chief of engineers, Gen. William P. Craighill, and ultimately by Secretary of War, D. S. Lamont.

Major Symons' plan calls for a breakwater 14,500 feet long with but three exposed ends. The original plan called for nine exposed ends. The breakwater will be in two sections, one section 2,800 feet long adjoining Stony Point, and one section 9,700 feet long between the Stony Point section and the existing breakwater. There will be two openings; one main opening 600 feet wide, at a distance of 2,800 feet from Stony Point, and one fair-weather opening 300 feet wide at the junction of the old and new works.

By moving the breakwater out to the location now proposed (as shown in the illustration), the area between it and the 18-foot curve would be 470 acres, an increase of 120 acres, or 35 per cent., over the former plans.

This area of deep water is none too large, considering the magnitude of the interests involved and the cost of the work.

As Major Symons so truly observes: "The navigable capacity of the channels connecting the Great Lakes is being increased, ships are being built greater in size and draught, and the end is not yet in sight. In planning a harbor for Buffalo, it is wise to provide ample accommodation for the largest ships which it is at all likely will want to come and make use of the harbor."

In concluding his report, Major Symons submitted the following summary of recommendations:

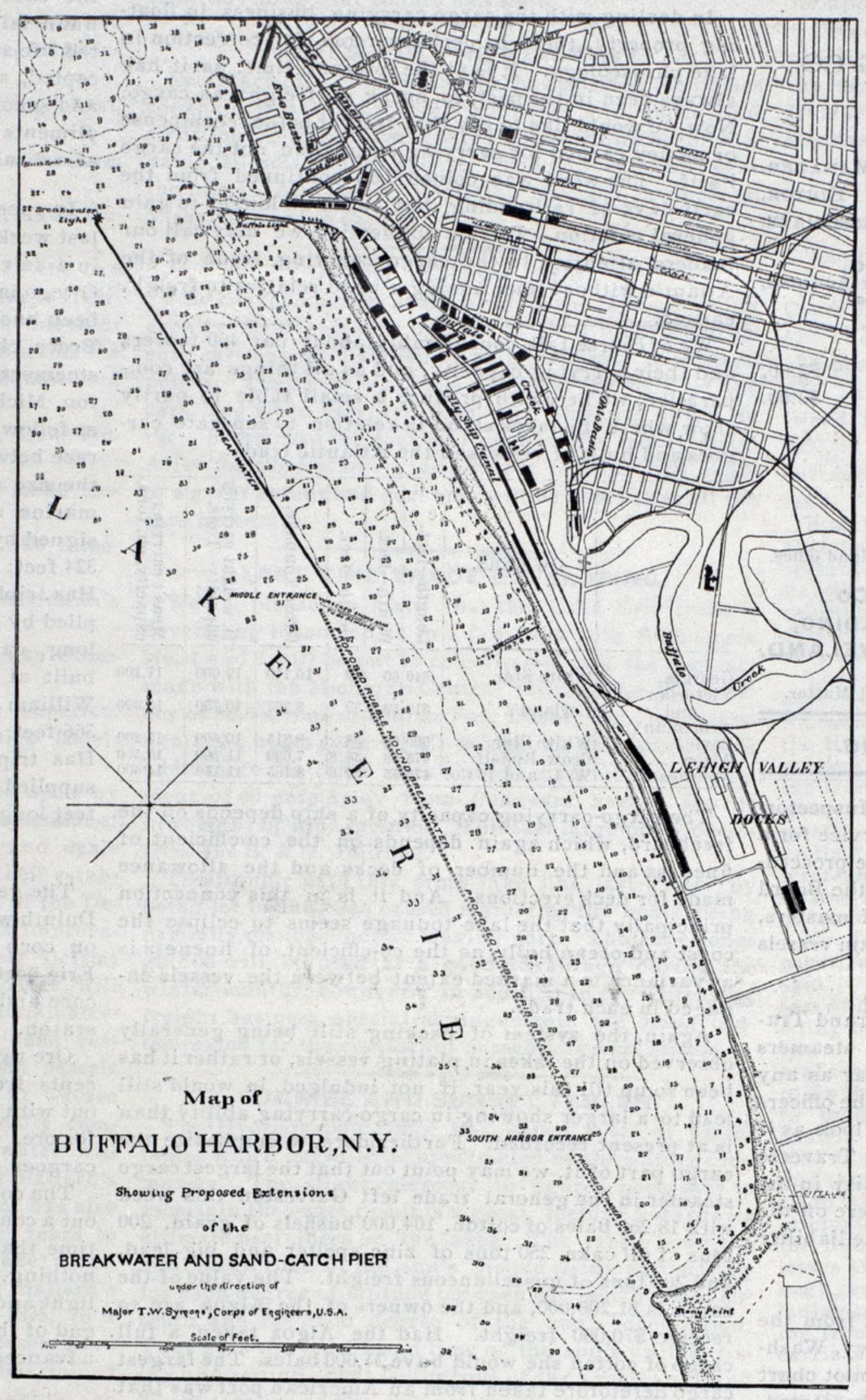
"That for 5,000 feet in length on its northern end, the type of breakwater adopted be a rubble mound.

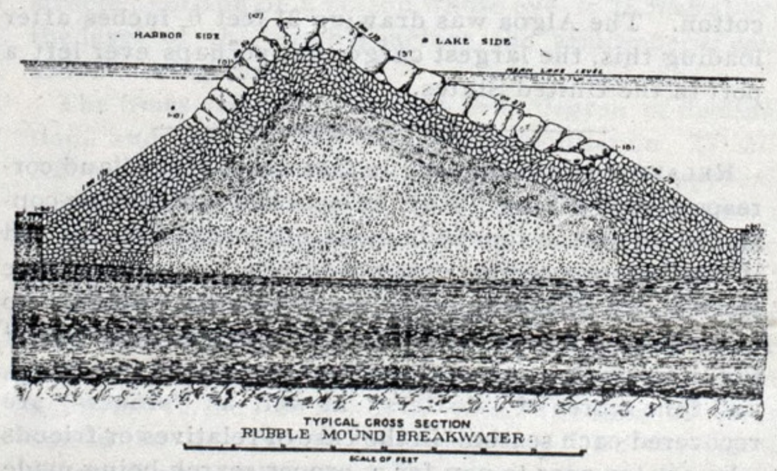
"That for the remainder of the breakwater the type adopted be the timber crib mounted upon an artificial foundation extending down to the solid rock.

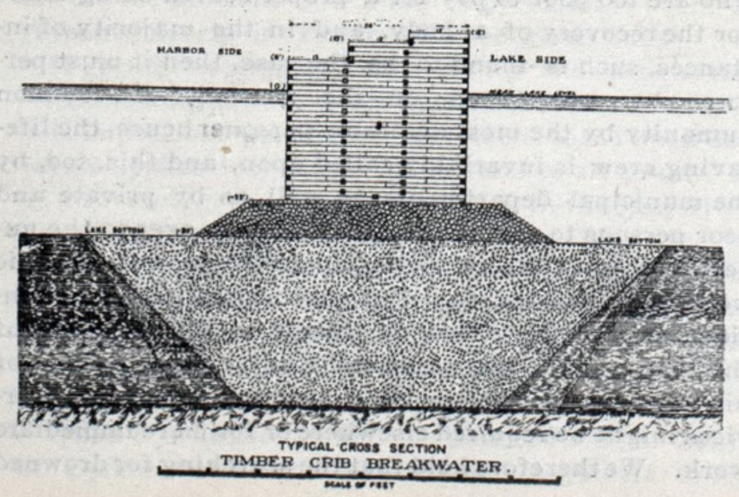
"The estimated cost of the work as recommended is as follows: 5,000 feet rubble breakwater at $176.13, $880,650; 7,500 feet timber crib breakwater, at $186.64 (average), $1,399,816; total, $2,280,466.

"This includes 10 per cent. for engineering, superintendence, contingencies, etc. The unit prices on which the estimates are based are those of the board of engineers, for excavation, gravel, small stone and large stone. The crib work estimates are based upon actual contract prices."

The new breakwater will give a large, commodious area for the accomodation of shipping. It will permit wharves, piers and manufacturing establishments to be built out from the main shore into well protected waters, all of which can be reached with the greatest facility by water and rail. It will enable an opening to be made and maintained directly into the great excavated basins of the Lehigh Valley Railroad Co., on the Tifft farm, access to which is now only through the Blackwell canal.







MARITIME LAW.

OREGON RY. & NAV. CO. et al. v. LAWTON et al.

Circuit Court of Appeals, Ninth Circuit. June 15, 1896.

1. SHIPPING—LIMITATION OF LIABILITY—OWNER'S PRIVITY OR KNOWLEDGE. In the proceeding under Rev. St. §§ 4283—4289, for the limitation of the liability of a corporation, owner of a steam vessel which has been damaged by the explosion of her boiler, privity or knowledge of a defective condition of the boiler is not to be imputed to the corporation unless the defects were apparent, and of such a character as to be detected by the inspection of an unskilled person, if the corporation has in good faith employed a competent person to inspect the boiler. Accordingly, held, that where a corporation owning a steam vessel had delegated to a competent and skilled marine engineer the duty of inspecting the boiler on such vessel, and supervising the repair thereof, it was entitled to limit its liability for damage resulting from an explosion of the boiler through a defect not apparent to an unskilled person, although there had been negligence on the part of some of its employes in the inspection or repair of the boiler.

2. SAME.—If the government inspectors of steam vessels fail to discharge properly their duty of inspection of a vessel, privity or k owledge of defects which would have been revealed by a proper inspection is not to be imputed to a corporation owning the vessel, which has delegated the matter of the inspection of the vessel to a competent employe.

3. SAME—EVIDENCE.—In a proceding under Rev. St. §4283, for the limitation of the liability of a shipowner, where it appears that such owner is a railroad corporation, having its home office a long distance from the place where the vessel was operated, it is not necessary to show by direct testimony that the principal officers of such corporation at such home office had no personal knowledge of the condition of such vessel, or of the steps taken to inspect and repair her.

4. SAME—REV. ST. § 4493—ACT JUNE 26, 1884. Rev. St. § 4493, making exceptions in favor of passengers, from the rule of limitation of liability of a shipowner under Rev. St. §§ 4283—4289, is not repealed by Act June 26, 1884 (1 Supp, Rev. St. 440.).

5. SAME—INSPECTION OF STEAM VESSEL REPAIRS.—It is as much the duty of an owner of a steamship, under Rev. St. § 4418, to cause an inspection of a boiler which has been repaired in a substantial part, as to cause an inspection of a new boiler before using the same; and a failure to cause such inspection will render the owner of the vessel liable, under Rev. St. §4493, to a passenger injured in consequence of the explosion of the boiler.

6. SAME.—A failure to comply with the steamboat inspection law may be invoked to prove that a shipowner is not entitled to a limitation of liability under Rev. St. §4283, though it is not set up in pleadings of the parties to the proceedings for limitation.

SANDUSKY AS A COAL SHIPPING PORT.

When the season of navigation opens next year the importance of Sandusky as a coal shipping point will be greatly increased. The port will be in a position, by the use of new maahinery, to more than double the capacity of its docks. Coal unloading machines to be erected on the Columbus, Sandusky & Hocking railroad docks in the West End have been contracted for, and the process of construction will be commenced in a few weeks. The machines are expected to work a quick revolution in the methods of transferring coal from a railway car to a vessel.

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THE RECORD is indebted to the Supervising Inspector-General of the U. S. Steamboat Inspection Service for a duplicate copy of his last annual report and the proceedings of the 43d and 44th annual meetings of the Board of Supervising Inspectors as well as a list of masters, mates, pilots and engineers of merchant steam vessels licensed during the year.

IN the collision which sunk the steamer Grand Traverse on Lake Erie the chief officers of both steamers were in charge of the deck so that in so far as any inquiry being made regarding the collison by the officers of the steamboat inspection service it would look as if the master of the Livingstone as well as the Traverse might be exonerated from blame or culpability in the matter of collision if they prove that they were off the deck at the time and had not been warned of the liability of collision before the impact took place.

THE RECORD is pleased to receive this week from the Bureau of Navigation, Department of the Navy, Washington, D. C., a copy of the North Atlantic pilot chart for the current month. It should be candidly stated, Charles D. Sigsbee, Commander, U. S. N., the Hydrographer is keeping the valuable delineations published from his office, fully up to the high standard of excellence originated and maintained by his predecessors. The chart now before us is perfect from a typographical standpoint and in technicque nothing of course can be added. This is as it should be from so thoroughly trained, capable and scientific a source as the U. S. Hydrographic Office U. S. N.

THE longer we live the more we learn; as for instance. A Detroit daily recently quoted as follows: "We (—) examined the log of —— for last night, and was surprised to find that it gave the location of the wreck of the Grand Traverse as "two minutes above the light." This in nautical language means west of the light, but for fear of any mistake The —— questioned Capt. (——), who corroborated the log and said this was correct. This removes the wreck several miles west of where it was reported sunk, and places it at the worst part of the Essex coast channel." Now if the foregoing is not nautical parlance will some well-informed plough-boy instruct us. Providing the wreck stood high out of the water and the "light" low or vice-versa, on a dark night with a clear atmosphere, and a steamer was proceeding at an unknown rate of speed either towards or from the light, and the observer's eye was only 38 feet 4 inches above the level of the water or even if that angle was an unknown quantity, there might possibly be still some way for a keen mathematician to solve the problem, but a marine reporter, or the captain of a ferry boat to make it out correct partakes of rather more gall than we like to credit them with.

CARGO CARRYING.

In dealing with the cargo carrying business in floating property, there is perhaps room for correction in lake phraseology. It is at the present time, as it has always been in the past, to speak of freight as cargo. Now we would like to say that freight is the recompense or money earned for carrying cargo, and not the cargo itself. The word was coined and continued from the early days of railroading, but ought no longer to gain general mention. In this connection we may call our readers' attention to the cargo carrying trade of the Atlantic without mentioning a word relative to freight earned.

We of course talk considerably about our 400-foorers and their carrying capacity, and as all things are comparative, we herewith produce a small table to partly show where the lakes stand in relation to separate cargoes and hulls of vessels in the Atlantic trade.

	OWNERS.	Length—feet.	Width—feet.	Depth—feet.	Gross Tonnage.	D. weight carryi'g capacity—Tons.	Meas't carrying capacity, cb. tons.
Georgia.....	White Star.....	540	60	40	10,150	12,000	17,100
Victorian and Armenian ...	Leyland's	512	59.3	39	8,767	10,750	15,300
Cevic.....	White Star.....	500	60	38	8,315	10,600	15,200
Algoa.....	Crow Rudolf....	475	58	34.8	7,690	11,300	15,500
American	W. L. and P. Co.	475	55	39.6	8,195	11,150	14,600

The cargo-carrying capacity of a ship depends on the freeboard, which again depends on the co-efficient of fineness and the number of decks and the allowance made for deck erections. And it is in this connection principally that the lake tonnage seems to eclipse the coast and ocean hulls, as the co-efficient of fineness is at variance to a marked extent between the vessels engaged in each trade.

Again, the system of packing still being generally observed on the lakes in plating vessels, or rather it has been so up till this year, if not indulged in would still lead to a larger showing in cargo-carrying ability than is at present recorded. Furthermore, to emphasize the cargo part of it, we may point out that the largest cargo steamer in the general trade left Galveston this week with 18,260 bales of cotton, 104,000 bushels of grain, 200 tons of oil cake, 250 tons of zinc spelter and pig lead, and 200 tons of miscellaneous freight. The value of the cargo is $1,200,000, and the owners of the Algoa are to receive $70,000 freight. Had the Algoa taken a full cargo of cotton she would have 24,000 bales. The largest cargo heretofore taken from an American port was that of the stermship American. She carried 22,000 bales of cotton. The Algoa was drawing 21 feet 6 inches after loading this, the largest cargo that perhaps ever left a port in the United States.

RELATIVE to the inquiry in last week's Cleveland correspondence asking "Why the local life-saving crew continued its search for the body of a drowned fireman and if such a proceeding was not intrenching on private work." To this question we must reply that there is no other known means of securing a drowned body except the life-saving crew at Cleveland undertake the work, and thus scores of "floaters" as well as "sinkers" are recovered each season. In the case of relatives or friends who are too poor to pay for a proper search being made for the recovery of a body, and in the majority of instances, such is found to be the case, then it must perforce be undertaken on the grounds of common humanity by the most available persons, hence, the life-saving crew is invariably called upon, and this, too, by the municipal departments as well as by private and poor persons to search, grapple and turn over to the undertakers the bodies picked up after drowning. The work itself besides requiring special facilities and considerable skill is carried on strictly at the discretion of the keeper of the station, nor will he have any portion of his crew absent or engaged in this duty when their services might be required elsewhere or for more immediate work. We therefore hold that the searching for drowned bodies is not only commendable but almost obligatory on the part of the crew of a life-saving station, on the grounds, that they recover bodies where others would fail, and in the case where relatives are poor or the floater is unknown no one else would attempt to recover gratuitously much less give the body a decent burial. In the case of people of means desiring to make some financial acknowledgment of the services rendered by the life-savers to themselves or friends it cannot be accepted, a matter which we think ought to be looked into and some fund started which would permit of such compliments being covered into a general or local treasury as a disability, pension or life insurance indemnity.

IT appears that the telegraph report so widely sent out last week that the Oglebay walked away from the Owego in a fair all-around race is not correct and that the Owego is still the "greyhound" which she has always been known to be ever since she came out. Mr. Robert Bruce, chief engineer of the Flint & Pere Marquette steamers, writes to the Evening Wisconsin from Ludington, Mich., concerning the steamers Owego and Oglebay, as follows: "Owing to controversy regarding the recent race between the Owego and Oglebay, a comparison of the size and power of the steamers may be of interest to marine men: The Owego was built at Buffalo and designed by Mr. Mallory, of New York. Length of keel, 324 feet; beam 41½ feet; depth of hold, 25 feet 6 inches. Has triple-expansion engines 28, 42½, 72x54 stroke, supplied by six boilers 11 feet 8 inches diameter by 12 feet long, carrying 165 pounds steam. The Oglebay was built at Bay City, Mich., by the F. W. Wheeler Co., William Wills superintending engineer. Length of keel, 366 feet, beam, 45 feet; depth of hold, 26 feet 7 inches. Has triple-expansion engines, 23, 37½, 63x44 stroke, supplied by three boilers 12 feet 6 inches diameter by 12 feet long, carrying 170 pounds steam."

FREIGHT REPORT.

The general freight situation is on the improve. The Duluth wheat rate holds steady at 3 cents, with 2½ cents on corn and 2¼ cents on barley from Chicago to Lake Erie ports, to Lake Ontario 4⅛ cents has been paid on corn and a likely raise all around during the rest of the season.

Ore rates are easy at 75 cents from Marquette and 65 cents from Escanaba, but, as the grain business holds out with an improving aspect there is no rush to charter for ore. A dollar neat has been offered on two small cargoes of ore from Two Harbors.

The coal situation is also brighter and as we pointed out a couple of issues ago, owners now see for a fiftieth time that it is worse than useless to carry coal for nothing, hence, the best tonnage is going up the lakes light and getting the best possible dispatch at either end of the route, therefore the nominal rate on coal has advanced say 5 cents.

SHIPPING FLOUR EAST.

Word comes from the head of the lakes that the mills of Superior, Wis., will run night and day from now until the close of navigation with the expectation of filling orders before the high, all-rail rates take effect. The flour market is much better than it was some weeks ago, and the indications are that it will continue to advance for a while at least. The Minneapolis mills are shipping an immense lot of flour via the lakes, very little being stored in warehouses there, as most of the mills are selling their flour direct to the trade. The foreign shipments are continuing larger than for some time, and the domestic market is very firm with a fair prospect of a good advance in prices.

A TRANSFER OF MASTERS.

The Minnesota Steamship Co. has done some tall changing of masters this week, but all on the line of promotions. Capt. Root has been relieved of the command of the steamer Mariposa and ordered to Sault Ste. Marie, to look after the Minnesota Co.'s fleet. Shipshusband Capt. George Mallory has gone to Port Colborne to look after the whaleback steamer Bartlett and consorts, en route to Lake Ontario with grain cargoes. Capt. Morgan, of the Marina, takes command of the Mariposa.

Illness has compelled Capt. Stewart to retire from the command of the steamer Samoa. He is succeeded by Capt. Fury of the Shenandoah, which steamer is to be laid up at Buffalo on her arrival there.

AIDS TO NAVIGATION.

And now it is is determined that the Lake Carriers' Association will ask the light-house board to endorse the following proposed aids to navigation :

1. Suitable provision for marking new channel at Ballard's reef above Lime Kiln crossing, lower Detroit river.

2. Two gas buoys or other suitable lights on the two shoals near Gravelly island, Poverty passage, entrance to Green bay, Lake Michigan.

3. Gas buoy or other suitable light on Lansing shoal, north of Squaw island, Lake Michigan.

4. A gas buoy or other suitable light on Graham shoal, Straits of Mackinaw.

5. A light and fog signal on Middle island, Lake Huron.

6. A gas buoy or small lightship to replace the can buoy at the turning point in Mud lake, St. Marys river.

7. A new set of range lights and three gas buoys or other suitable lights, to mark the new channel in the upper St. Marys river, between Point Iroquois and Round island.

8. A light and signal on St. Murtin's reef, Lake Huron.

9. A light and signal on Scarecrow island, Lake Huron.

10. A light and signal on Crisp's Point, Lake Superior.

11. A gas buoy or other suitable light on Fisherman's shoal, near Rock island, Lake Michigan.

12. A light and signal on Rock of Ages, Lake Superior.

13. A light and signal on Bark point, Lake Superior.

14. A lightship or lighted buoy on Peshtigo shoal, Green bay.

Following this statement of new aids agreed upon by the association, Mr. Keep, in a letter to the chairman of the board, takes up each of them separately and deals with advantages that would be derived from their establishment. Regarding lights at the lower end of the Detroit river, he says: "The recent government improvements at Grosse point and Bar point, lower Detroit river, and at various points in the St. Mary's river, will at the close of the present season of navigation materially increase the available draft of all large lake vessels. Heretofore the avaibable draft of such vessels has been limited in the St. Mary's river and at Grosse point. With the improvements now practically completed at these points, the available draft of water will hereafter be limited by the depth of water at Ballard's reef, Detroit river. The Channel at that point has also been materially improved this year, but for years to come it will be the shoalest point in the lake route. Last season disasters were so numerous at Ballard's reef, culminating on the night of Sept. 13, 1895, in a damage of nearly $100,000, in which several vessels were involved, that the Lake Carriers' Association determined that something must be done in the way of making the channel safer without delay. Accordingly, we placed five stakes along the west line of the deep water, and arranged to have lanterns hung upon them at night. The stake lights have done their work well, and since the channel has been thus marked in the night time there have been no disasters or damage of any consequence. We have maintained the lights there all this season. The government dredges are about through with their work at that point, and soon more satiafactory and permanent methods of lighting will be needed. Practically all the lake commerce passes by this point, and not even the main channel into New York passes such a tonnage as this point. I have had a talk with Capt. Gridley, inspector of this light-house district, on the subject, and know he has recommended a scheme of lighting at Ballard's reef which will prove entirely satisfactory and will not involve the government in very large expense."

MILWAUKEE LEADS.

In the matter of discharging coal Duluth has borne the palm for rapid handling of cargoes. We now find that the Milwaukee firm of of B. Uhrig & Son is breaking the best records yet made at the head of the lakes. The steamer Fred Pabst reached her dock at an early hour Sunday morning. Work was begun upon her cargo of 2,900 tons of coal at half past 7 o'clock and by five minutes before 6 o'clock in the evening every ton had been taken out and the steamer was ready to proceed to an elevator for a cargo of grain. This represents ten hours and twenty-five minutes in handling 2,900 tons of coal. But, as at least half an hour must be deducted for the nooning of the coal-handlers, the actual time is reduced to nine hours and fifty-five minutes. The Milwaukee Wisconsin takes occasion to say that this is indeed a record-breaking feat, and it is safe to say better than anything that Duluth can show.

NAMES FOR THE NEW NAVY.

Secretary of the Navy Herbert has selected the names for the new battleships and gunboats now under construction. The three battleships will be known as the Alabama, Illinois and Wisconsin. The gunboats will bear the names Annapolis, Marietta, Newport, Princeton, Vicksburg and Wheeling.

GRAIN VERSUS COAL.

The coal companies at the head of the lake are being greatly inconvenienced because of their inability to secure cars enough in which to ship their coal to western points. The grain trade has captured the bulk of the cars, and when they are thus used shippers object to them being used for coal, as it makes the wheat dirty. After the close of navigation wheat receipts will cease to a great extent and coal men will be able to get all the cars necessary.

LAKE ERIE TRADE DEVELOPING.

We are pleased to learn that the Lake Erie trade is developing inasmuch as in a few days both Shenangos No. 1 and 2 will be put in commission and the contract made with the Michigan Central railroad for the delivery of 50,000 tons of coal at Port Dover, Ont., will necessitate the boats running all winter, as this contract in addition to the large ones already made, means a shipment of 60 cars a day from Conneaut harbor for the next eight or nine months. This last large order comes from the B. & O. railroad.

The trouble with this cross lake line last winter, by being ice bound, was caused mainly by the boats being partially disabled before leaving port. The experience gained will be used at a good advantage during the winter months, however. In addition to the increasing freight business, special arrangements are being contemplated for the comfort of passengers next season.

SUNRISE AND SUNSET TABLES.

The Hydrographic Office has issued a set of useful tables which ought to be appreciated by the sailing community. The slight reference to figures necessary to ascertain the exact result is a great feature towards its ultimate usefulness on the lakes. The tables show the local mean time of the sun's visible rising and setting for each degree of latitude between 60° north and 60° south and for each degree of the sun's declination. They give the local mean time of the sun's visible rising and setting—that is, the time of the appearance and disappearance of the sun's upper limb—in the unobstructed horizon of a person whose eye is 15 feet above the level of the earth's surface, the atmospheric conditions being normal.

The times are given for each even degree of declination, and also for the maximum declination, 23° 27′. Above each degree of declination is given the approximate date upon which it falls. Each table covers a range of declination between 0° and the maximum, corresponding to a period of time of three months.

To ascertain the time of rising or setting for any given date and place, enter the appropriate table with the latitude and declination, incorpolating if the degrees are not even; in the line R will be found the time of rising and in the line S, the time of setting. Be careful to choose the table in which the "approximate date" corresponds nearly or exactly, with the given date.

If greater accuracy is desired they should be entered with the declination as an argument—not the date—as it is impossible to construct any table based upon dates whose application should be general to all years. But as a given degree of declination will, in the majority of years, fall upon the date given in the table as the "approximate date," and as, when it does not do so, it can never be more than one day removed therefrom, it will answer, where a slight inaccuracy may be admitted, to enter the table with the date as an argument, thus avoiding the necessity of ascertaining the declination.

When it is desired to find the time of rising or setting at a place where the clocks are not regulated to local time, but keep the standard time of some other meridian, Table XVII will give the amount of the correction to be applied to the local mean time. Find the difference between the longitude of the place and that of the standard meridian, and enter the table; abreast it will be found the correction, and at the head of the table directions for applying it, according as it is east or west.

Table XVII gives the reduction of local mean time of sunrise and sunset to standard meridian time, that is, if the local meridian is east of standard meridian, subtract from local mean time, and if local meridian is west of standard meridian, add to local mean time.

THE HARTER ACT ON COLLISIONS.

THE HARTER ACT NOT A DEFENCE FOR COLLISION.

The Harter Act, which has an important bearing upon the rights of shippers, came before the Supreme Court of the United States for the first time in the case of "The Steamship Delaware," against which an action had been brought by the owner, master and crew of the tug Talisman, to recover damages for a collision between these vessels, which occurred in September of 1893, in Gedney's Channel, off Sandy Hook, at the outer entrance of New York harbor, and within three miles of land.

Both the District Court and the Circuit Court of Appeals held that the Delaware was in fault, and referred certain questions as to whether she was absolved from liability by the provisions of the Harter Act—"An act relating to navigation of vessels, bills of lading and to certain obligations, duties and rights in connection with the carriage of property."

The owner of the Delaware (the respondent) claimed that the steamship was not liable for the damage to the Talisman, relying on the first part of section three of the Harter Act, "That if the owner of any vessel, transporting merchandise or property to or from any port in the United States of America, shall exercise due diligence to make the said vessel, in all respects, seaworthy and properly manned, equipped and supplied, neither the vessel, her owner or owners, agent or charterers, shall become or be held responsible for damage or loss resulting from faults or errors in navigation or in the management of said vessel."

Mr. Justice Brown, in delivering the opinion of the court, which affirmed the decree of the courts below, said : "It is entirely clear, however, that the whole object of the act is to modify the relations previously existing between the vessel and her cargo. This is apparent not only from the title of the Act, but from its general tenor and provisions, which are evidently designed to fix the relations between the cargo and the vessel, and to prohibit contracts restricting the liability of the vessels and owners to certain particulars connected with the construction, repair and outfit of the vessel, and the care and delivery of the cargo." He then went on to state that the Act was the outgrowth of repeated attempts made by vessel owners in recent years to limit the liability of their vessels and themselves against losses arising from unseaworthiness, bad storage and negligence in navigation, by the insertion in bills of lading of stipulation exempting them from losses arising from such causes, until the common law liability of carriers by sea had been frittered away to such an extent, by reason of these stipulations being held by the courts, both in England and this country, to be valid contracts, that it led to the passage of the Harter Act. Continuing, he said : That the general words of the third section, above quoted, if detached from the context and broadly construed as a separate provision, would be susceptible of the meaning claimed; but when read in connection with the other sections, and with the remainder of section three, they show conclusively that the liability of a vessel to other vessels with which it may come in contact, was not intended to be affected. The first, second, fourth and seventh sections, dealt exclusively with bills of lading and their covenants, and the third section, after using the general language relied upon by the respondent here, with regard to nonliability for faults or errors in navigation or in the management of the vessel, contains a further exemption of 'loss arising from dangers of the sea, or other navigable waters, acts of God, or public enemies, or the inherent defect, quality or vice of the thing carried, or from insufficiency of package, or seizure under legal proceas, or for loss resulting from any act or omission of the shipper or owner of the goods, his agent or representative, or from saving or attempting to save life or property at sea, or from any deviation in rendering such service.' These provisions have no possible application to the relations of one vessel to another, and are mainly a re-enactment of certain well known provisions of the common law applicable to the duties and liabilities of vessels to their cargoes. The fact, too, that by section six, the various sections of the Revised Statutes, which embody the limited liability act, are preserved unimpaired, would seem to indicate that the latter act was not intended to receive the broad construction claimed."

The result of this decision is that the Harter Act does not exempt the owner of one vessel from liability to another vessel for the consequences of negligent collision.

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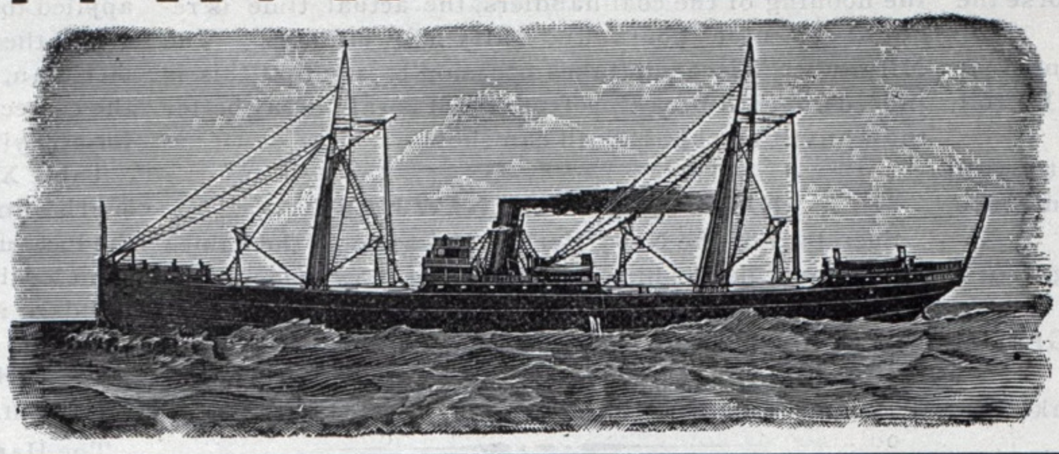

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CORRESPONDENCE.

☞We do not hold ourselves responsible in any way for the views or opinions expressed by our correspondents. It is our desire that all sides of any question affecting the interests or welfare of the lake marine should be fairly represented in THE MARINE RECORD.

DIMENSIONS CHRISTOPHER COLUMBUS.

In reply to an unsigned letter of last week and one bearing the signature of the sender this week, we are pleased to state that the dimensions of the passenger whaleback steamer Christopher Columbus are as follows: 362 feet over all, 42 feet beam and 24 feet depth of hold. Engines, triple expansion, diameter of cylinders, 26, 42 and 70 by 42 feet stroke, 3,000 h. p.

OWEGO STILL THE GREYHOUND.

BUFFALO, Oct. 24.

To the Editor of The Marine Record:

In your issue of October 22, I notice again the statement that the Oglebay can beat the Owego.

I think if Capt. Hutchinson would take the pains to investigate the matter, he would find that the Owego can beat him under any and all conditions with only four of her six boilers under steam.

On the occasion of his grand achievement on Lake Michigan, the Owego was only using part of her boiler equipment and you are still safe in saying that the Owego is the fastest boat on fresh water.

Yours truly,

EDWARD GASKIN,

TRAMP STEAMERS—STEERING ENGINES.

2 POWIS PLACE, QUEEN SQUARE, }
LONDON, W. C. October 10. }

DEAR SIR.—I am much obliged by the publicity you have given my letter on "Whalebacks" but should like to point out that there is a mistake at end of 9th line, (page 7, of Sept. 17.) "schooner" should read "steamer."

The kind of steamer used in the coal and grain trade here is very well illustrated by the adv. of Messrs. F. H. Wheeler & Co., except that the uppermost bridge is not carried here.

I shall be glad to hear which is the steering engine most in favor on the lakes, for quickness of action and freedom from breakdowns under all circumstances, and to hear from makers of same. Will you draw your readers' attention to the fact that postage to England is five cents the half ounce?

SIR PURCELL TAYLOR, BART., D. Sc.

VISIBLE SUPPLY OF GRAIN.

As compiled for THE MARINE RECORD by George F. Stone, Secretary Chicago Board of Trade, October 24, 1896:

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Albany	.....	50,000	130,000	.....	10,000
Baltimore	779,000	1,206,000	1,093,000	95,000	.....
Boston	1,624,000	298,000	172,000	.....	.....
Buffalo	1,840,000	847,000	441,000	140,000	573,000
" afloat	.....	.....	.....	.....	.....
Chicago	15,896,000	7,996,000	2,686,000	701,000	449,000
" afloat	.....	.....	.....	.....	.....
Cincinnati	1,000	2,000	10,000	2,000	29,000
Detroit	469,000	46,000	36,000	27,000	.....
" afloat	.....	.....	.....	.....	.....
Duluth and Superior	5,195,000	32,000	271,000	412,000	1,031,000
" " afloat	.....	.....	.....	.....	.....
Indianapolis	223,000	22,000	13,000	.....	.....
Kansas City	588,000	34,000	112,000	7,000	.....
Milwaukee	377,000	4,000	2,000	154,000	142,000
" afloat	.....	.....	.....	.....	.....
Minneapolis	15,317,000	16,000	202,000	11,000	16,000
Montreal	511,000	26,000	373,000	25,000	56,000
New York	5,881,000	3,177,000	2,408,000	387,000	105,000
" afloat	8,000	.....	62,000	58,000	40,000
Oswego	23,000	.....	.....	.....	75,000
Peoria	205,000	149,000	504,000	17,000	8,000
Philadelphia	467,000	668,000	153,000	.....	.....
St. Louis	3,246,000	111,000	67,000	19,000	2,000
" afloat	7,000	56,000	.....	.....	.....
Toledo	758,000	34,000	386,000	44,000	.....
" afloat	.....	.....	.....	.....	.....
Toronto	238,000	.....	56,000	.....	36,000
On Canal	808,000	35,000	522,000	264,000	701,000
On Lakes	2,721,000	2,997,000	1,179,000	142,000	1,143,000
On Mississippi	103,000	50,000	23,000	.....	.....
Grand Total	57,285,000	17,856,000	10,901,000	2,505,000	4,416,000
Corresponding date 1895	50,486,000	4,805,000	4,458,000	1,000,000	3,930,000

EARLY CLOSING OF ERIE CANAL.

An Albany dispatch reads that "it is possible the date for the closing of the canals may be fixed somewhat earlier this fall than usual, in order to permit the state engineer and surveyor and the superintendent of public works to expedite some of the work connected with the $9,000,000 improvement project. Plans for considerable of the work have been completed, and a few of the contracts have been already let. Others will be let in the course of a few weeks. The canal board will hold a meeting to-day for the purpose of considering certain pending matters relating to the improvement."

The lake interests at Buffalo could not do better than look into this canal closing movement, or it may hamper, if not seriously affect the forwarding of grain from western routes by water for some weeks previous to the actual closing of lake navigation.

OBITUARY NOTICES.

Capt. Robert Howlett, a centenarian, passed away at Grand Haven, Mich., Saturday night, October 24, at the home of his son-in-law, Capt. William Loutitt. He was a native of England, but for sixty-five years had been a resident of the state of Michigan and an early settler of the present site of the town of Grand Rapids. During his active business career the captain owned quite a fleet of vessels and made some heavy season lumber charters when Grand Haven was an important Lake Michigan lumber port. Born in 1805, and settling early in the rich western country, the captain accumulated a large property. In recent years he has lived with his son-in-law, Capt. Loutitt. He leaves two sons, Nelson and John, and one daughter, Mrs. Loutitt.

* * *

After an illness of six weeks, Captain Critchell, late master of the steamer D. C. Whitney, died at Marine City on Saturday morning of typhoid pneumonia. Capt. Critchell was born in Ogdensburg fifty-five years ago, and always followed the lakes. He was a member of the Odd Fellows and Royal Arch Masons. His funeral was held under the auspices of the Masonic fraternity, and the body left Marine City for Ogdensburg on the steamer Arundel last Monday morning.

HUDSON RIVER FERRY BOATS.

Two powerful double-ended ferry boats were launched last week, one from the yards of Hillman & Co. and the other from Cramps. They are sister ships and built for the Pennsylvania Railroad Co. to ply between Jersey City and 23d St., New York, and are different from others of the river ferry boats in having twin screws at each end and two smokestacks. The dimensions are: Length over all, 206 feet; length between rudder posts, or keel length, 184 feet; beam moulded, 46 ft; over guards, 65 ft.; depth, from base line to top of deck beams, 16 ft.; average depth of hold, 15 ft. The hulls are of steel, with water-tight compartments. Each vessel will be propelled by two three-cylinder compound engines, with cylinders 20, 32 and 32 inches in diameter by 24-inch stroke, each turning two propeller wheels on either end on a continuous shaft. These propeller wheels, four in number, will be 8 ft. 3 in., in diameter. Each engine is to develop 1,500 horse-power. Steam will be generated by four water-tube boilers, having a working pressure of 200 pounds to the square inch.

BETTER VESSELS BUILT.

A well known mechanical expert has this to say concerning modern steel in shipbuilding:

"The most important improvement in recent years is in the quality of the steel entering into the construction of lake vessels and in the arrangement of their water tanks. The tank top of the best new steamers is really an upper bottom the thickness of which is 50 per cent. in excess of that generally fitted prior to the year 1894 This upper bottom is now doubled rivited throughout and when the joints are properly stiffened and supported the plates should be capable of withstanding the impact of iron ore, falling upon them for many years without ruinous injury."

WRECK PROPOSALS.

Sealed proposals for the wreck of the steamer Grand Traverse, sunk off Colchester Reef light, Lake Erie, in 30 feet of water, will be received by the Lackawanna Transportation Co. until November 2. The bids will be opened at 2 o'clock on that day at the company's office at Buffalo.

SHERIFFS PROPELLER WHEELS.

It must be gratifying to the manufacturers of the Sheriffs wheels to be in a position to record the follow list of recent orders for their well-known propellers.

Two of 5 feet 2 inches diameter for the steamer McEwan, at New Orleans, La.; one 7 feet diameter for the steamer Vanguard, at New Orleans, La.; one 38 inches diameter for a small steamer at Morgan City, La.; one 6 feet 6 inches diameter for the tug Barnes, at Manistee, Mich., and one six feet diameter for the tug Carrie Ryerson, at Muskegon, Mich. The Sheriffs wheel recently placed on the steel steamer John W. Moore is said to have reduced her running time between Buffalo and Milwaukee twelve hours, which should be a pleasing result both to the owners of the steamer and the manufacturers of the wheel.

NOTES.

THE friends of L. Boyer's Sons will be pleased to learn that they are having splendid success in the sale of their patent sectional water tube boiler. There are, of course, water tube boilers and water tube boilers, but in point of small space, light weight and perfect circulation the Boyer boiler is hard to beat. Descriptions and such other information as may be desired can be obtained by applying to L. Boyer's Sons, 90 Wall street, New York.

THE two fast twin-screw express steamers of the North German Lloyd Steamship Co., now building in the yards of the Vulcan Ship Building Co., Stettin, and of F. Schichau, Danzig, Germany, respectively, will be named "Emperor William the Great," and "Emperor Frederick." The first one of these two express steamers will be 13,800 tons register, 649 feet in length, 66 feet beam, 39 feet depth, and the second one 12,800 tons register, 600 feet in length, 64 feet beam and 38 feet depth.

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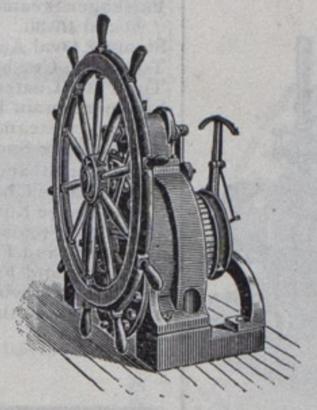

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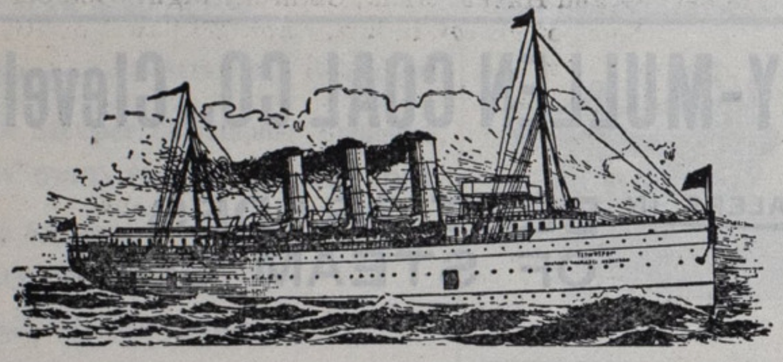

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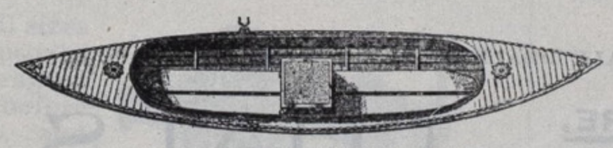

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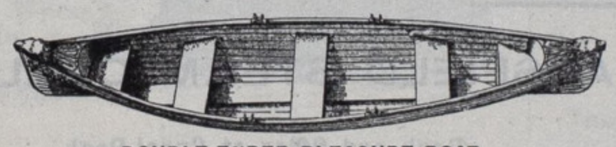

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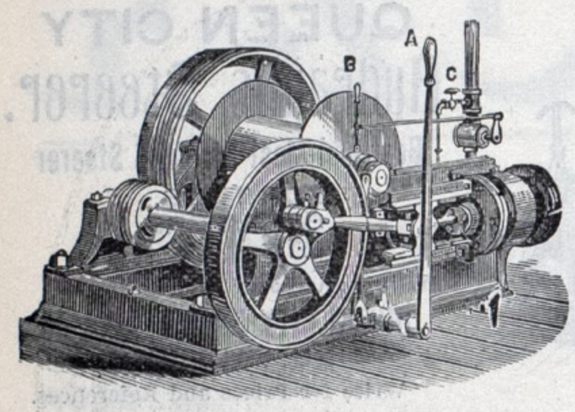

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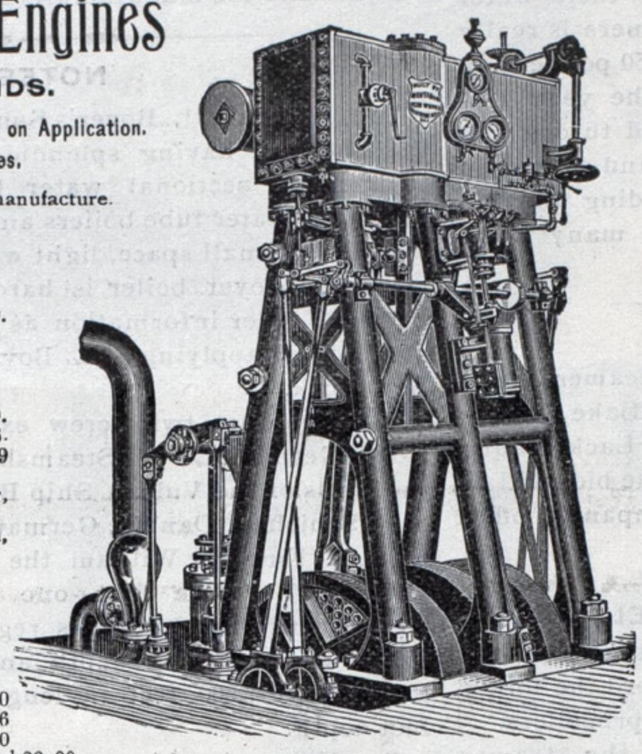

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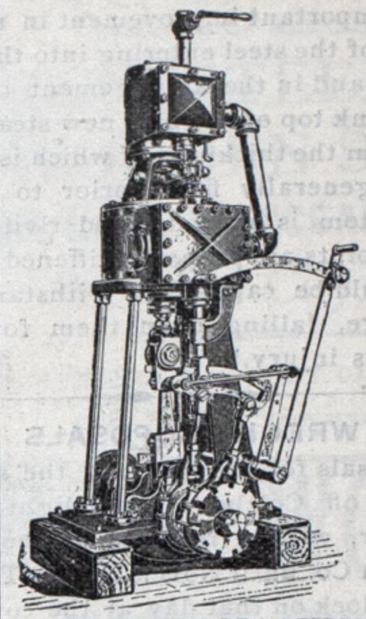

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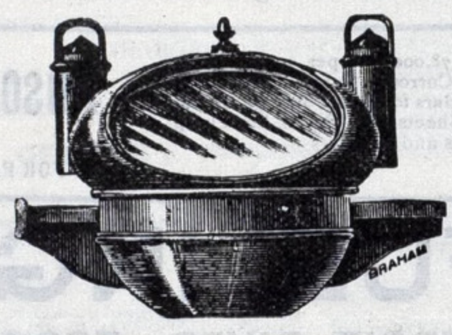

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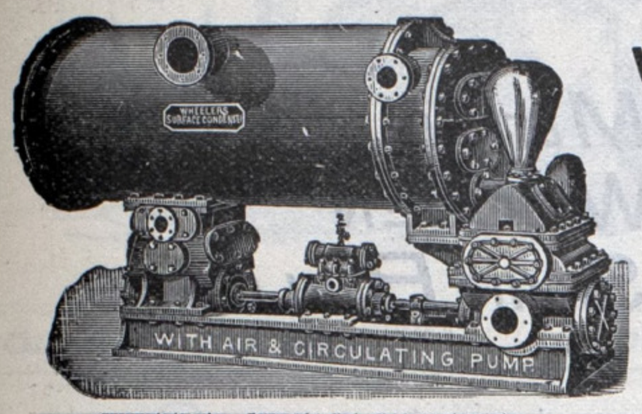

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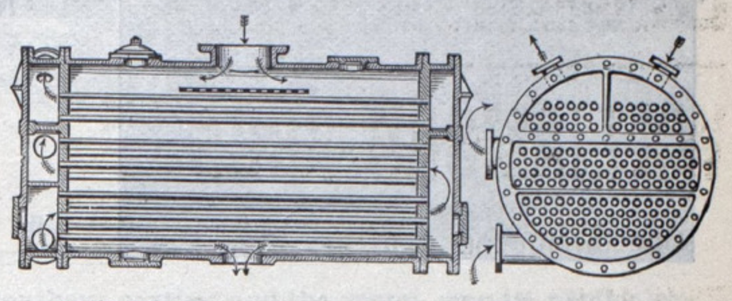

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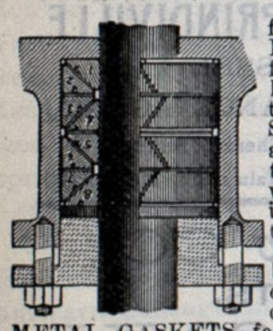

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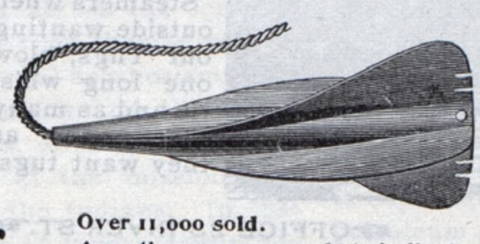

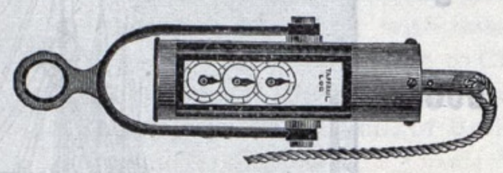

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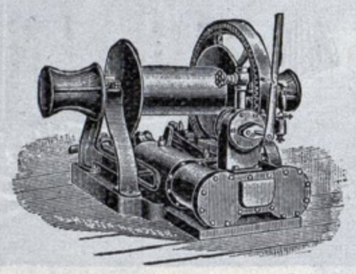

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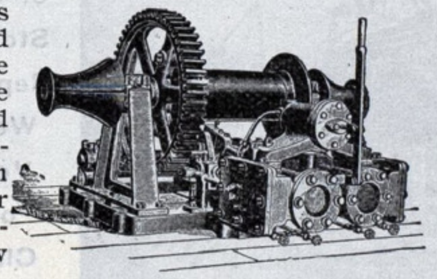

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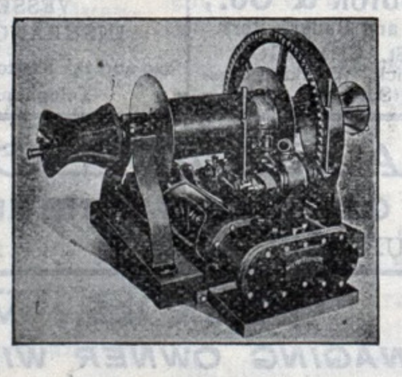

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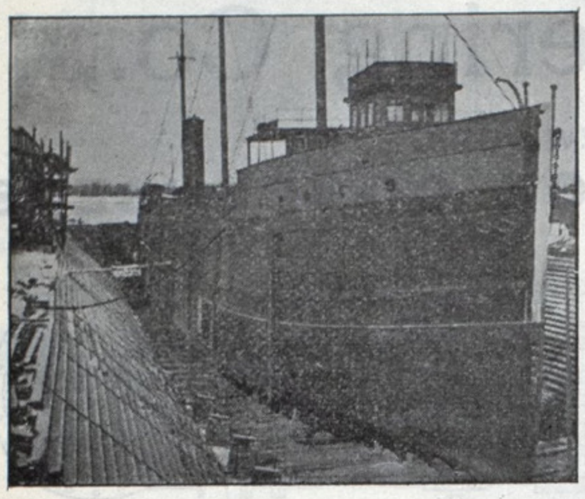

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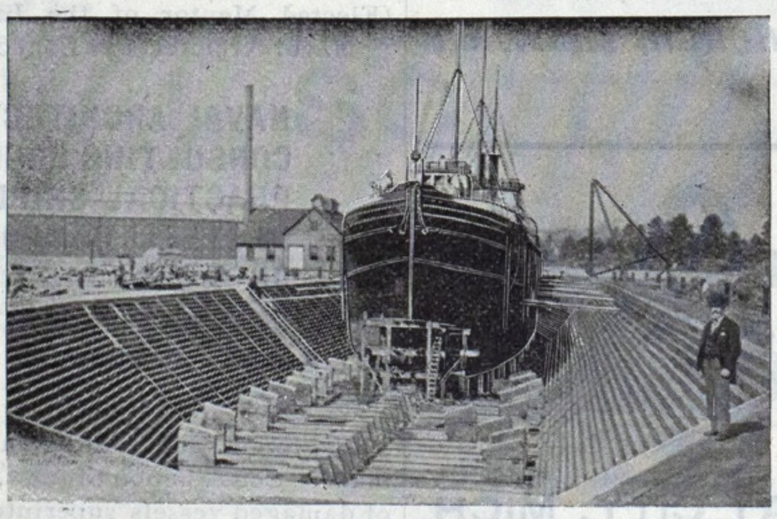

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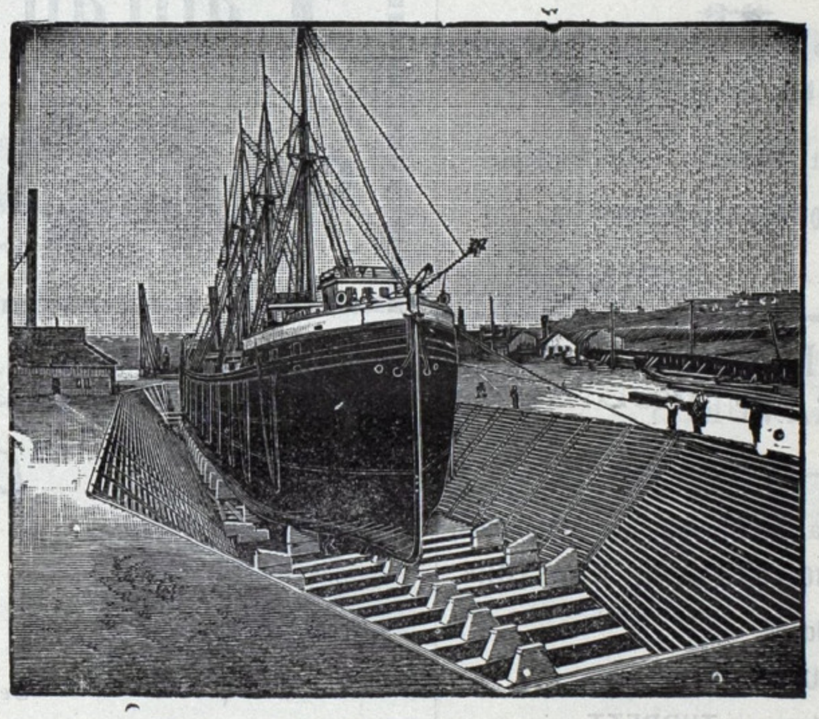

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